

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Town Branch of Piper Creek (or Piper Creek)

Waterbody Segment at a Glance:

County: Polk
Nearby Cities: Bolivar
Length of impairment: 0.5 miles
Pollutant: Volatile Suspended Solids (VSS)
Source: Bolivar Wastewater Treatment Plant



State map showing location of watershed

Propose to change NFR to VSS on the 2002 303(d) list

TMDL Priority Ranking: High

Description of the Problem

Beneficial uses of Town Branch of Piper Creek

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life and Human Health associated with Fish Consumption

Use that is impaired

- Protection of Warm Water Aquatic Life

Standards that apply

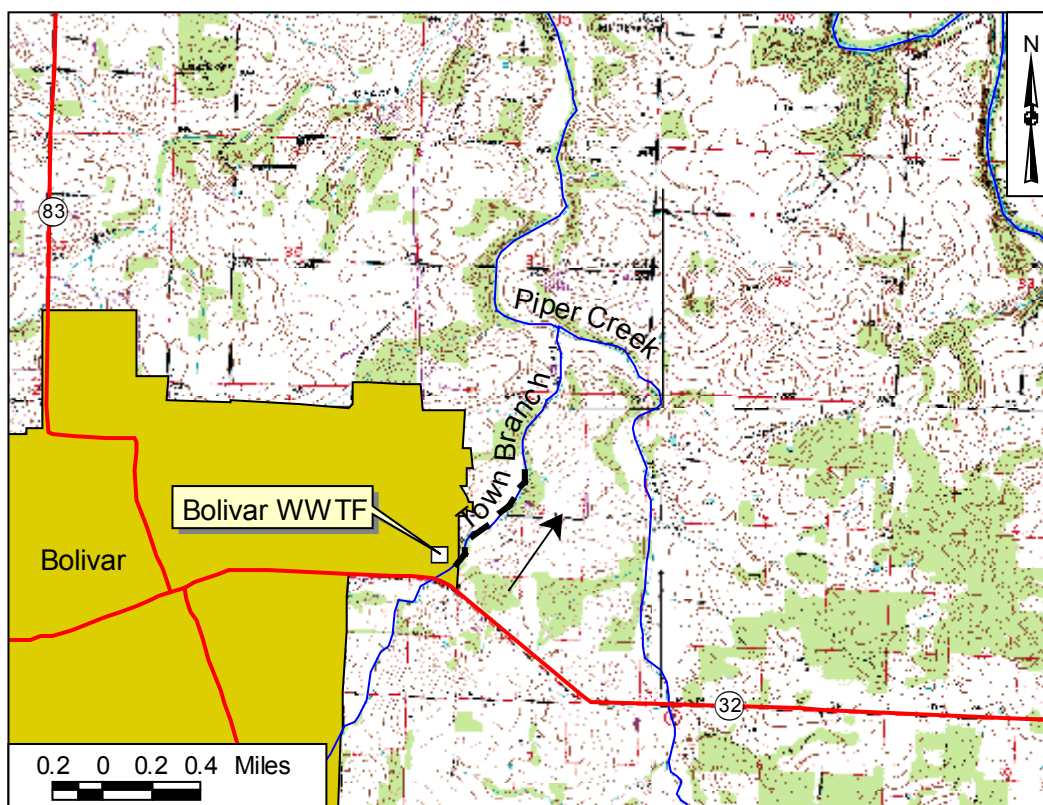
- Standards for Volatile Suspended Solids may be found in the general criteria section of the Missouri Water Quality Standards (WQS), 10 CSR 20-7.031(3)(A) and (C) where it states:
 - Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
 - Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.

Any waterbody that was listed for Non-Filterable Residue (NFR) in 1998 is now being listed as Volatile Suspended Solids (VSS). The new listing gives a clearer picture of the specific sources contributing to the impairment. VSS are organic solids coming from wastewater treatment plants.

Town Branch of Piper Creek is called Piper Creek on the 303(d) list. This is due to confusion about its location as listed in the WQS and will be corrected as the standards get revised. The creek shows an accumulation of objectionable solids downstream from the Bolivar wastewater treatment plant

(WWTP). Volatile suspended solids refer to particles that are suspended in water, like algae, or those that settle out, like the sewage sludge in Town Branch. When these solids settle onto the streambed, they smother natural substrates (materials in the streambed), aquatic invertebrate animals (like crayfish and water insects) and fish eggs. Like all wastewater discharges in Missouri, the Bolivar WWTP has to meet the requirements of a discharge permit issued by the Missouri Department of Natural Resources. The department plans additional studies of the stream. If these studies show that the stream is not meeting water quality standards, the discharge permit will be amended. Meeting the new requirements will result in improved water quality in Town Branch of Piper Creek.

Impaired Segment of Town Branch of Piper Creek in Polk County, Missouri



----- Impaired Segment —————> Direction of Flow

For more information call or write:

Missouri Department of Natural Resources

Water Pollution Control Program

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